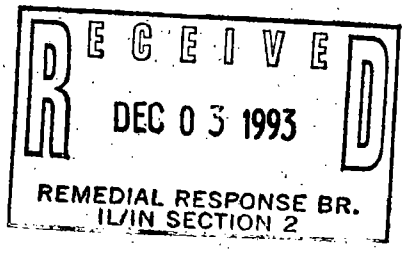
Winnebago Reclamation Service, Inc.



Thomas Hilbert
Environmental Engineer
Winnebago Reclamation
8403 Lindenwood Rd.
Rockford, IL 61109
(815) 874-4806
November 29, 1993

Mr. Bernie Schorle
Remedial Project Manager
United State Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Replacement and repair of monitoring well nest G119/G119A. Final Waste Elevation and scheduling of work for remaining major RD/RA elements.

Dear Bernie:

Since there is a significant amount planning and activity outlined for the coming year I feel that it may be appropriate to plan a meeting between the USEPA,WARZYN, and ourselves sometime in the afternoon during the latter half of the week begining December 5th, 1993 to discuss scheduling, the coordination of landfill projects with CERCLA projects, and any other concerns regarding the Pagel landfill/ACME Solvent study area. If you have some dates that are convenient for you please advise me and I will organize an acceptable date for everyone involved.

I have included a copy of the Illinois Environmental Protection Agency document LPC-PA2 which contains detailed instructions for landfill design submittals. This is the guidance that we will be following when putting together our application for "significant modification" of our exisiting IEPA operating permit inorder to comply with the newer IEPA solid waste regulations. Since we will be filing for a permit modification under 35 IAC 814 subpart C, there are certain elements outlined in LPC-PA2 that we are not required to submit. These are outlined at 35 IAC 814.302. The exemptions at 35 IAC 814.302 (1),(2) and (5) may be partially or wholly superseded by the requirements of 40 CFR part 258.

Recycling and
waste disposal

4920 Forest
Hills Road
Loves Park
Illinois 61111

P.O. Box 2071
Loves Park
Illinois 61130

815.654.5952
Fax 815.654.4717

Also enclosed is a narrative description of well repair, replacement and development as well as a boring log and well contruction reports for the well nest G119/G119A. G119 has been abandoned and the replacment well has been designated R119.

If you have any questions regarding any of the aforementioned subjects or the well repair and replacement procedures, please give me a call.

Sincerely,

Thomas Hilbert

cc: John Holmstrom, William Charles Ltd.
Gary Marzorati, William Charles Ltd.
Martin Hamper, WARZYN, Inc.

WELL REPLACEMENT AND REPAIR FOR G119/G119A

The following is a narrative description of the procedures used to replace and abandon well G119 and to repair well G119A. Well construction reports and a boring log for R119 are enclosed. The well construction report for G119A indicates revised elevations for the top of inner casing, top of outer casing, and ground surface:

ABANDONMENT OF WELL G119

G119 was not repairable due to the high probability that the seal above the well screen filter pack was damaged at the time the well was damaged. The well was abandoned using method I-B outlined in Table one of the IEPA publication "GROUNDWATER MONITORING NETWORK FOR NON-HAZARDOUS SOLID WASTE DISPOSAL FACILITIES,IEPA-DLPC, April 1990" (enclosed). The procedure was slightly altered by performing step 3 prior to step 2 and using a bentonite-grout (2lb powdered volclay® per 94lb bag of cement) in step 4.

INSTALLATION AND DEVELOPMENT OF REPLACEMENT WELL R119

R119 was installed using standard procedures outlined in 77 IAC part 920 and the aforementioned publication. The well location and elevations were surveyed using an surveyor registered and licensed in the state of Illinois. A boring log and well construction report have been produced and are enclosed. Ambient air monitoring performed within the exclusion zone indicated that no airborne hazards were present.

REPAIR OF WELL G119A

Field examination of well G119A indicated that the damage to the well was superficial. There was no evidence of damage to the seal above the filter pack or the bentonite backfill in the annular space above the filter seal. Repair of G119A was accomplished by removing the damaged section of riser pipe and splicing into the existing undamaged stainless steel riser at the coupling approximately 3 feet below ground surface. Only the 5 foot section of galvanized riser and protective casing was unrecoverable. The upper damaged section of casing was offset from the lower undamaged portion and soil was plugging the well casing indicating a need to redevelop well G119A. It is not expected that surface contamination will pose a problem in this well since the field is not farmed and there is no probability that runoff from surrounding cultivated properties has impacted this well. The only possibility of contamination would occur from deliberate action by the individual(s) who vandalized the well nest.

WELL DEVELOPMENT PROCEDURES FOR G119/G119A

Well G119 was developed by using a 3 foot stainless steel bailer to surge and purge the well. Approximately 25 gallons (29 well volumes) of water was removed using this technique prior to sampling the well.

Well G119A was developed using a 3 foot stainless steel bailer to surge the well and a Brainerd-Kilmer® hand pump to remove 50 gallons (16 well volumes) of water prior to sampling.

LOG OF TEST BORING

WARZYN

Project: Winnebago Reclamation
8403 Lindenwood Road
Location: Rockford, Illinois 61109

Boring No. R119
Surface Elevation 718.2
Job No.
Sheet 1 of 1

2100 Corporate Drive, Addison, Illinois 60101, (708) 691-5000

SAMPLE Number	Type	Rec. (in.)	Moisture	N Value	Depth (ft.)	PROFILE	VISUAL CLASSIFICATION and Remarks	BOREHOLE BACKFILL	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)
					0		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy			
					5					
					10					
1				11	▽		Medium, Dense, Light Brown Fine to Coarse SAND and GRAVEL, Silt and Trace of Clay intermittent			
					15					
					20		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy Installed Well R119 at 21 Feet			
					25					

WATER LEVEL OBSERVATIONS

While Drilling ▽ 12.0 ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Begin 11/3/93 End 11/3/93
Driller Fische Chief Rig
Logger T. Hilbert Editor P. Smith
Drill Method Hollow-Stem Auger Well
Installation by WRS

ID: JKP

ATTACHMENT B

• Illinois Environmental Protection Agency — Well Completion Report

Site #: 2018080001 County: Winnebago Well #: R 119

Site Name: Winnebago Reclamation Service, Inc Grid Coordinate: Northing 2003114.01 Easting 799230.31

Drilling Contractor: Fische Enterprises, Ltd. Date Drilled Start: 11-03-93

Driller: J. Reiner Geologist: T. Hilbert Date Completed: 11-03-93

Drilling Method: Hollow Stem Auger Drilling Fluids (type):

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Concrete w/1% Bentonite (dry wt)

Amount of cement: # of bags 1 lbs. per bag 94

Amount of bentonite: # of bags 0.2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: 6-20 and Formation Sand

Source of Sand: Northern Gravel Co. and Formation

Amount of Sand: # of bags 1.5 lbs. per bag 50

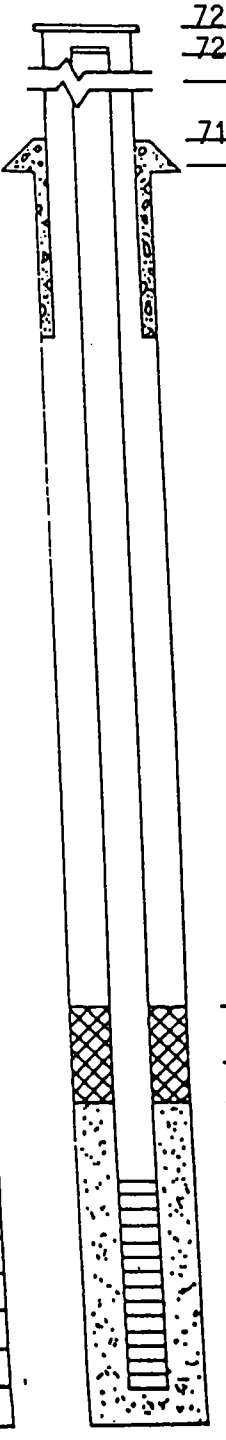
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	Threaded			
Riser pipe above w.t.	316			
Riser pipe below w.t.	316			
Screen	316			
Coupling joint screen to riser	Threaded			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	13.00'
Protective casing length	5.00'
Screen length	10.00
Bottom of screen to end cap	0.10'
Top of screen to first joint	0.24'
Total length of casing	23.34'
Screen slot size	0.010
% of openings in screen	
Diameter of borehole (in)	8.00"
ID of riser pipe (in)	2.00"



Elevations — .01 ft.

720	81	MSL Top of Protective Casing
720	31	MSL Top of Riser Pipe
2	11	ft. Casing Stickup
718	20	MSL Ground Surface
3	00	ft. Top of annular sealant
5	50	ft. Top of Seal
2	50	ft. Total Seal Interval
8	00	ft. Top of Sand
11	13	ft. Top of Screen
10	00	ft. Total Screen Interval
21	13	ft. Bottom of Screen
21	23	ft. Bottom of Borehole

Completed by: T. Hilbert Surveyed by: Gordon F. Stannard Ill. registration # 2388

Illinois Environmental Protection Agency — Well Completion Report

Site #: 2 0 1 8 0 8 0 0 0 1 County Winnebago Well # G119A

Site Name: Winnebago Reclamation Service, Inc. Grid Coordinate: Northing 2003126.2 Easting 799230.3

Drilling Contractor: Fische Enterprises, LTD. Date Drilled Start: no drilling/repair only

Driller: J. Reiner Geologist: T. Hilbert Date Completed: 11/03/93

Drilling Method: Hand excavated Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Quick Gel, Bentonite grout

Amount of cement: # of bags _____ lbs. per bag ____

Amount of bentonite: # of bags _____ lbs. per bag ____

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags _____ lbs. per bag _____

Type of Sand Pack: # 30 Flint sand and formation sand

Source of Sand: _____

Amount of Sand: # of bags _____ lbs. per bag _____

Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint				
Riser pipe above w.t.				
Riser pipe below w.t.				
Screen				
Coupling joint screen to riser				
Protective casing				

Measurements to .01 ft. (where applicable)

Riser pipe length	45.00'
Protective casing length	5.00'
Screen length	5.00'
Bottom of screen to end cap	~ 0.10'
Top of screen to first joint	~ 0.30'
Total length of casing	50.40'
Screen slot size	0.010"
# of openings in screen	
Diameter of borehole (in)	4.00"
ID of riser pipe (in)	2.00"

Elevations — .01 ft.

721	01	MSL Top of Protective Casing
720	51	MSL Top of Riser Pipe
3	31	ft. Casing Stickup
717	20	MSL Ground Surface
4	00	ft. Top of annular sealant
34	00	ft. Top of Seal
2	00	ft. Total Seal Interval
36	00	ft. Top of Sand
42	60	ft. Top of Screen
5	00	ft. Total Screen Interval
47	60	ft. Bottom of Screen
48	00	ft. Bottom of Borehole

Completed by: T. Hilbert Surveyed by: G. Stannard Ill. registration # 2388

LOG OF TEST BORING

WARZYN

Project: Winnebago Reclamation
8403 Lindenwood Road
Location: Rockford, Illinois 61109

Boring No. R119
Surface Elevation 718.2
Job No.
Sheet 1 of 1

2100 Corporate Drive, Addison, Illinois 60101, (708) 691-5000

SAMPLE Number	Type	Rec. (in.)	Moisture	N Value	Depth (ft.)	PROFILE	VISUAL CLASSIFICATION and Remarks	BOREHOLE BACKFILL	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)
					0		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy			
					5					
					10					
1				11	▽		Medium, Dense, Light Brown Fine to Coarse SAND and GRAVEL, Silt and Trace of Clay intermittent			
					15					
					20		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy Installed Well R119 at 21 Feet			
					25					

WATER LEVEL OBSERVATIONS

While Drilling ▽ 12.0 ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Begin 11/3/93 End 11/3/93
Driller Fische Chief Rig
Logger T. Hilbert Editor P. Smith
Drill Method Hollow-Stem Auger Well
Installation by WRS

ID: JKP

ATTACHMENT B

Illinois Environmental Protection Agency — **Well Completion Report**

Site #: 2018080001 County Winnebago Well # R 119

Site Name: Winnebago Reclamation Service, Inc Grid Coordinate: Northing 2003114.01 Easting 799230.31

Drilling Contractor: Fische Enterprises, Ltd. Date Drilled Start: 11-03-93

Driller: J. Reiner Geologist: T. Hilbert Date Completed: 11-03-93

Drilling Method: Hollow Stem Auger Drilling Fluids (type):

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Concrete w/1% Bentonite (dry wt)

Amount of cement: # of bags 1 lbs. per bag 94

Amount of bentonite: # of bags 0.2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: 6-20 and Formation Sand

Source of Sand: Northern Gravel Co. and Formation

Amount of Sand: # of bags 1.5 lbs. per bag 50

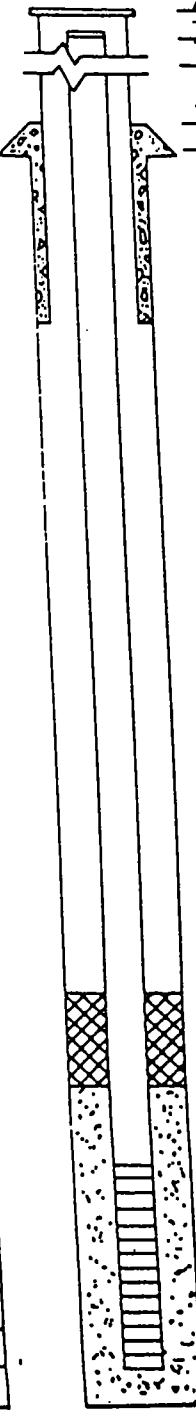
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	Threaded			
Riser pipe above w.t.	316			
Riser pipe below w.t.	316			
Screen	316			
Coupling joint screen to riser	Threaded			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	13.00'
Protective casing length	5.00'
Screen length	10.00
Bottom of screen to end cap	0.10'
Top of screen to first joint	0.24'
Total length of casing	23.34'
Screen slot size	0.010
% of openings in screen	
Diameter of borehole (in)	8.00"
ID of riser pipe (in)	2.00"



Elevations — .01 ft.

720	81	MSL Top of Protective Casing
720	31	MSL Top of Riser Pipe
2	11	ft. Casing Stickup
718	20	MSL Ground Surface
3	00	ft. Top of annular sealant
5	50	ft. Top of Seal
2	50	ft. Total Seal Interval
8	00	ft. Top of Sand
11	13	ft. Top of Screen
10	00	ft. Total Screen Interval
21	13	ft. Bottom of Screen
21	23	ft. Bottom of Borehole

Completed by: T. Hilbert Surveyed by: Gordon F. Stannard Ill. registration # 2388

Illinois Environmental Protection Agency — Well Completion Report

Site #: 2 0 3 1 8 0 8 0 0 0 1 — County: Winnebago — Well #: G119A

Site Name: Winnebago Reclamation Service, Inc. — Grid Coordinate: Northing 2003126.2 — Easting 799230.3

Drilling Contractor: Fische Enterprises, LTD. — Date Drilled Start: no drilling/repair only

Driller: J. Reiner — Geologist: T. Hilbert — Date Completed: 11/03/93

Drilling Method: Hand excavated — Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Quick Gel, Bentonite grout

Amount of cement: # of bags _____ lbs. per bag ____

Amount of bentonite: # of bags _____ lbs. per bag ____

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags _____ lbs. per bag _____

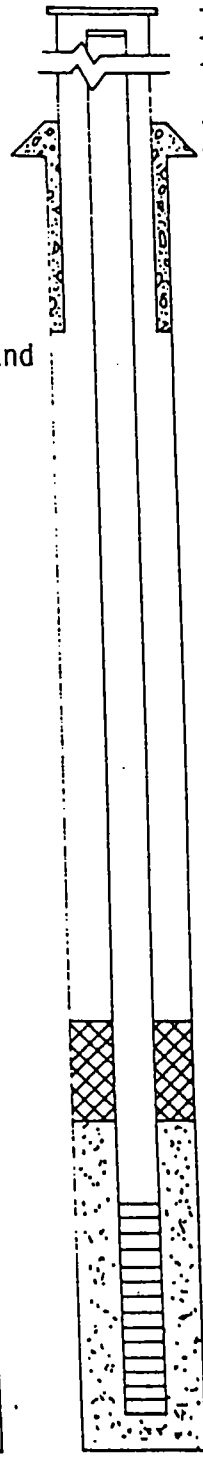
Type of Sand Pack: # 30 Flint sand and formation sand

Source of Sand: _____

Amount of Sand: # of bags _____ lbs. per bag _____

Elevations — .01 ft.

721	01	MSL Top of Protective Casing
720	51	MSL Top of Riser Pipe
3	31	ft. Casing Stickup
717	20	MSL Ground Surface
4	00	ft. Top of annular sealant



34	00	ft. Top of Seal
2	00	ft. Total Seal Interval
36	00	ft. Top of Sand
42	60	ft. Top of Screen
5	00	ft. Total Screen Interval
47	60	ft. Bottom of Screen
48	00	ft. Bottom of Borehole

Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint				
Riser pipe above w.t.				
Riser pipe below w.t.				
Screen				
Coupling joint screen to riser				
Protective casing				

Measurements

to .01 ft. (where applicable)

Riser pipe length	45.00'
Protective casing length	5.00'
Screen length	5.00'
Bottom of screen to end cap	~ 0.10'
Top of screen to first joint	~ 0.30'
Total length of casing	50.40'
Screen slot size	0.010"
# of openings in screen	
Diameter of borehole (in)	4.00"
ID of riser pipe (in)	2.00"

Completed by: T. Hilbert — Surveyed by: G. Stannard — Ill. registration # 2388

LOG OF TEST BORING

WARZYN

Project: Winnebago Reclamation
8403 Lindenwood Road
Location: Rockford, Illinois 61109

Boring No. R119
Surface Elevation 718.2
Job No.
Sheet 1 of 1

2100 Corporate Drive, Addison, Illinois 60101, (708) 691-5000

SAMPLE Number	Type	Rec. (in.)	Moisture	N Value	Depth (ft.)	PROFILE	VISUAL CLASSIFICATION and Remarks	BOREHOLE BACKFILL	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)
					0		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy			
					5					
					10					
1				11	▽		Medium, Dense, Light Brown Fine to Coarse SAND and GRAVEL, Silt and Trace of Clay intermittent			
					15					
					20		Blind Drilled Refer to Boring Log G119 for Detailed Stratigraphy Installed Well R119 at 21 Feet			
					25					

WATER LEVEL OBSERVATIONS

While Drilling ▽ 12.0 ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Begin 11/3/93 End 11/3/93
Driller Fische Chief Rig
Logger T. Hilbert Editor P. Smith
Drill Method Hollow-Stem Auger Well
Installation by WRS

ID: JKP

ATTACHMENT B

Illinois Environmental Protection Agency — **Well Completion Report**

Site #: 2018080001 County Winnebago Well # R 119

Site Name: Winnebago Reclamation Service, Inc Grid Coordinate: Northing 2003114.01 Easting 799230.31

Drilling Contractor: Fische Enterprises, Ltd. Date Drilled Start: 11-03-93

Driller: J. Reiner Geologist: T. Hilbert Date Completed: 11-03-93

Drilling Method: Hollow Stem Auger Drilling Fluids (type):

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Concrete w/1% Bentonite (dry wt)

Amount of cement: # of bags 1 lbs. per bag 94

Amount of bentonite: # of bags 0.2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: 6-20 and Formation Sand

Source of Sand: Northern Gravel Co. and Formation

Amount of Sand: # of bags 1.5 lbs. per bag 50

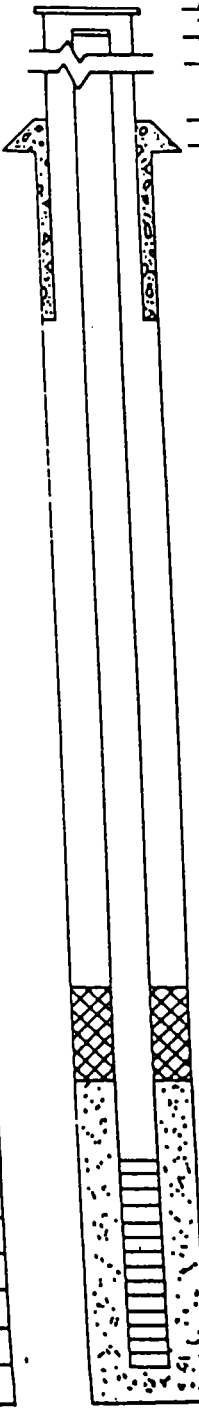
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	Threaded			
Riser pipe above w.t.	316			
Riser pipe below w.t.	316			
Screen	316			
Coupling joint screen to riser	Threaded			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	13.00'
Protective casing length	5.00'
Screen length	10.00
Bottom of screen to end cap	0.10'
Top of screen to first joint	0.24'
Total length of casing	23.34'
Screen slot size	0.010
% of openings in screen	
Diameter of borehole (in)	8.00"
ID of riser pipe (in)	2.00"



Elevations — .01 ft.

720	81	MSL Top of Protective Casing
720	31	MSL Top of Riser Pipe
2	11	ft. Casing Stickup
718	20	MSL Ground Surface
3	00	ft. Top of annular sealant
5	50	ft. Top of Seal
2	50	ft. Total Seal Interval
8	00	ft. Top of Sand
11	13	ft. Top of Screen
10	00	ft. Total Screen Interval
21	13	ft. Bottom of Screen
21	23	ft. Bottom of Borehole

Completed by: T. Hilbert Surveyed by: Gordon F. Stannard Ill. registration # 2388

Illinois Environmental Protection Agency — Well Completion Report

Site #: 2011808000 1 — County: Winnebago — Well #: G119A

Site Name: Winnebago Reclamation Service, Inc. — Grid Coordinate: Northing 2003126.2 — Easting 799230.3

Drilling Contractor: Fische Enterprises, LTD. — Date Drilled Start: no drilling/repair only

Driller: J. Reiner — Geologist: T. Hilbert — Date Completed: 11/03/93

Drilling Method: Hand excavated — Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Quick Gel, Bentonite grout

Amount of cement: # of bags _____ lbs. per bag ____

Amount of bentonite: # of bags _____ lbs. per bag ____

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags _____ lbs. per bag _____

Type of Sand Pack: # 30 Flint sand and formation sand

Source of Sand: _____

Amount of Sand: # of bags _____ lbs. per bag _____

Well Construction Materials

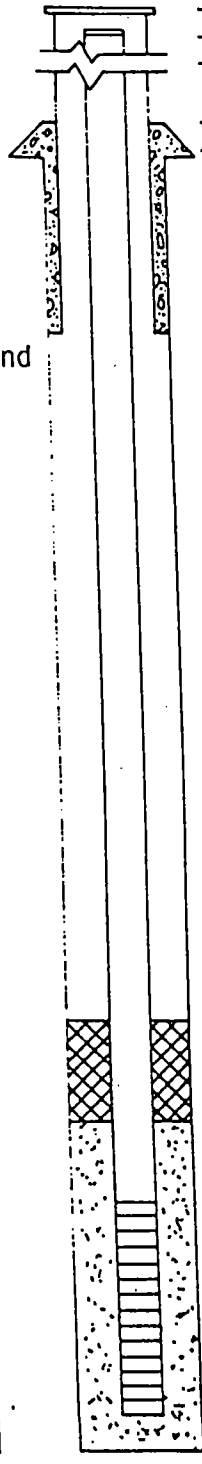
	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint				
Riser pipe above w.t.				
Riser pipe below w.t.				
Screen				
Coupling joint screen to riser				
Protective casing				

Measurements

to .01 ft. (where applicable)

Riser pipe length	45.00'
Protective casing length	5.00'
Screen length	5.00'
Bottom of screen to end cap	~ 0.10'
Top of screen to first joint	~ 0.30'
Total length of casing	50.40'
Screen slot size	0.010"
# of openings in screen	
Diameter of borehole (in)	4.00"
ID of riser pipe (in)	2.00"

Elevations — .01 ft.



721	01	MSL Top of Protective Casing
720	51	MSL Top of Riser Pipe
3	31	ft. Casing Stickup
717	20	MSL Ground Surface
4	00	ft. Top of annular sealant
34	00	ft. Top of Seal
2	00	ft. Total Seal Interval
36	00	ft. Top of Sand
42	60	ft. Top of Screen
5	00	ft. Total Screen Interval
47	60	ft. Bottom of Screen
48	00	ft. Bottom of Borehole

Completed by: T. Hilbert — Surveyed by: G. Stannard — Ill. registration # 2388